

Title (en)

Variable injection rate high pressure fuel pump

Title (de)

Brennstoffhochdruckpumpe mit einstellbarer Einspritzmengengeschwindigkeit

Title (fr)

Pompe à carburant haute pression avec taux d'injection réglable

Publication

EP 1418335 A2 20040512 (EN)

Application

EP 03021861 A 20030926

Priority

US 28989202 A 20021107

Abstract (en)

A high pressure fuel pump having a variable fuel injection rate, including a pump body, a pump cylinder formed in the pump body and a piston reciprocable within the pump cylinder, which defines a pressurization chamber (120). The pump piston (106) has a reduced diameter portion which provides a primary piston (112). A piston annulus is slidably mounted thereon and provides a secondary piston (116). An annular actuation chamber (122) adjoins the secondary piston (116) opposite the pressurization chamber (120). An actuation passage (124) is provided between a return fuel drain and the ctuation chamber (122), which is selectively open or closed passively by pump piston (106) movement and/or dynamically by operation of an actuation solenoid valve (128). If the actuation chamber passage (124) is open, then during the pressurization stroke the secondary piston (116) will remain stationary relative to the pump body, but if it is closed then the secondary piston (116) must stroke in unison with the primary piston (112).

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IPC 8 full level

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CPC (source: EP US)

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